**Gummy Bear Osmosis Lab Report**

Ms. Ottolini, PreAP Biology

**Lab Report:** You will be graded on your graph and three conclusion paragraphs only. Below is a description of expectations and a rubric for these three paragraphs.

**Expectations:**

Paragraph #1: REE – Results with Evidence and Explanation

1. Results – Explain how the goals/purpose of the lab were/were not achieved.
2. Evidence – Support answers with numerical data.
3. Explanation – Do the data support or not support (refute) hypothesis?

Paragraph #2: PE – Possible Errors (must have at least 2)

1. Explain experimental design errors that would lead to false data.
2. Recommendations on how to improve the experiment to minimize the error.

Paragraph #3: PA – Practical Applications

1. What have you learned? (this must relate to the results of the experiment)
2. Recommendations for follow up experiments.

**Rubric:**

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| --- | --- | --- | --- | --- |
| **Category** | | **Excellent (5 points)** | **Good (3 points)** | **Needs Improvement (1 point)** |
| **Conclusion** | **A) Results**  **Evidence**  **Explanations** | * Conclusion begins with a clear, concise discussion of the purpose of the experiment or study. * All of the important results are explained in relation to the purpose statement. * The results statement includes (numerical) evidence (including averages) when appropriate. * A clear and concise explanation of how the data supports or refutes expectations or hypotheses is given. | * The purpose of the experiment or study is mentioned but is not clear, concise, and accurate. * Most of the important results are explained in relation to the purpose statement. * The results statement includes evidence that is not numerical when needed. * Some explanation of results is given but no mention of how the data supports or refutes expectations or hypotheses. | * There is no mention of the purpose or the subject of the study. * The results of the experiment or study are not stated. * Little evidence is given for the results of the experiment. * Little explanation of whether the data supports or refutes expectations or hypotheses is given. |
| **B) Possible Errors** | At least two examples of procedural errors or uncertainties that could lead to inaccurate data are identified and explained. Discuss ways to avoid these errors in the future. | Examples of procedural errors or uncertainties are identified but no discussion of ways to avoid these errors. | Unclear examples of procedural errors or uncertainties that could lead to inaccurate data are identified and explained. |
| **C) Practical Applications** | A clear, concise explanation what you learned in this lab (must be related to the RESULTS of the experiment!), and recommendations for follow-up experiments. | An explanation lacking one of the following:  1. What you learned in this lab  2. Recommendations for follow-up experiments | An explanation lacking both of the following:  1. What you learned in this lab  2. Recommendations for follow-up experiments, |